

# PATENT ABSTRACTS OF JAPAN

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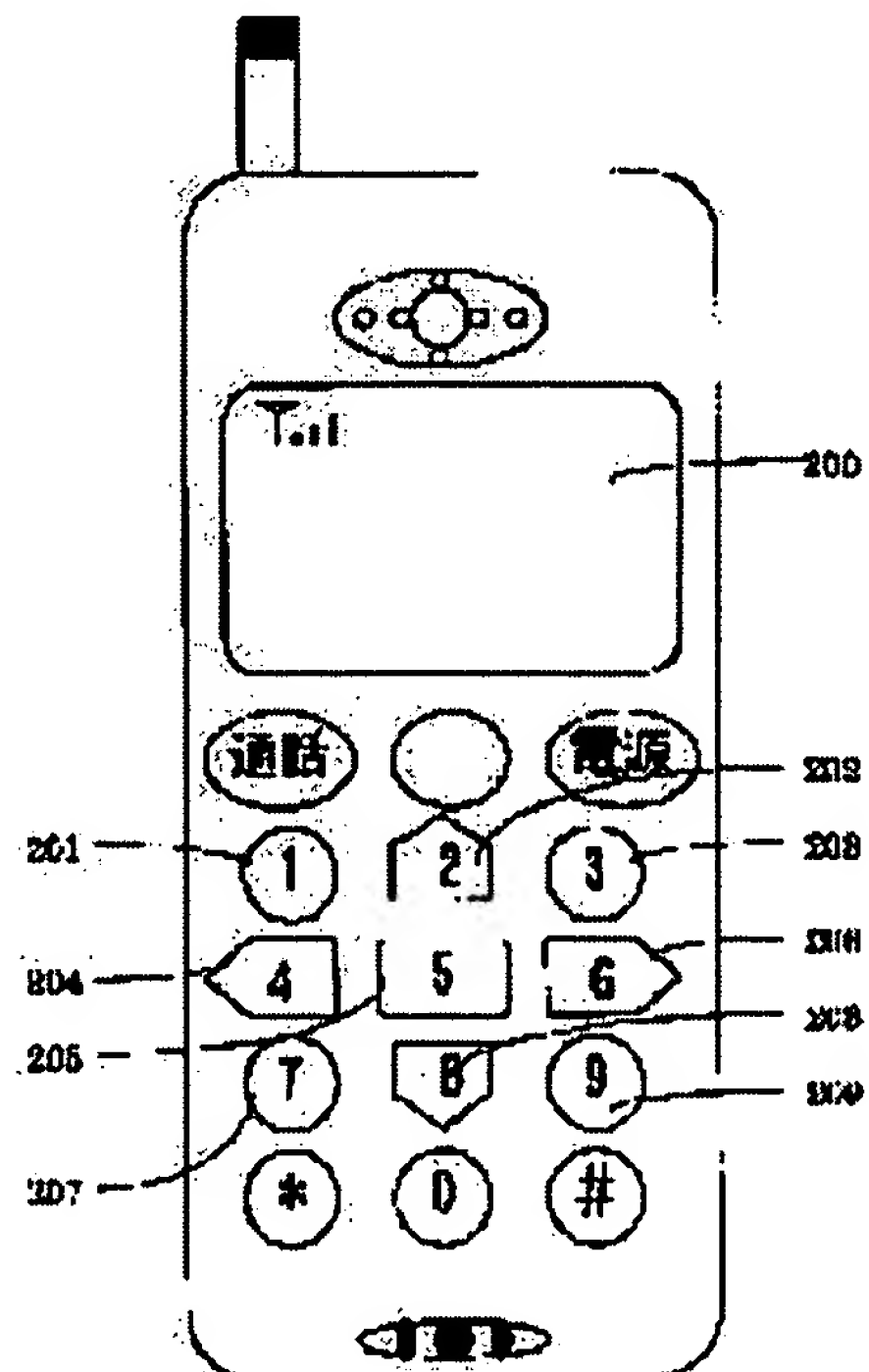
SUSO HIROSHI

## (54) TELEPHONE SET

### (57)Abstract:

PROBLEM TO BE SOLVED: To reduce user's operation mistakes by making the shapes of keys used at the time of moving a cursor the shapes representing a direction in which the cursor is moved.

SOLUTION: In the shapes of keys, a key (2) 202 has a shape showing an upward direction, a key (4) 204 has a shape showing a left direction, a key (6) 206 has a shape showing a right direction and a key (8) 208 has a shape showing a downward direction and they show the four vertical and horizontal directions and left and right directions of a telephone display screen 200 when the number input keys of an inputting part and keys that move a cursor are the same keys. An input switching controlling part discriminates whether it is a number inputting mode of a cursor inputting mode. In the case of the number inputting mode, a number corresponding to the number specified on each key is shown on the screen 200. In the case of the cursor inputting mode, the cursor is moved by the keys (2) 202, (4) 204, (6)



206 and (8) 208. Also, a key (5) 205 decides the current position of the cursor, acquires a character corresponding to the cursor position and shows an acquired character on the screen 200.

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## LEGAL STATUS

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[Date of requesting appeal against examiner's decision of rejection]

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CLAIMS

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[Claim(s)]

[Claim 1] Telephone characterized by making it the configuration showing the direction to which cursor moves the key to which cursor is moved in the telephone which operates a means to input a number, and the means to which cursor is moved by the same key.

[Claim 2] Telephone characterized by equipping the core of a key to which cursor is moved with the key which opts for selection in claim 1.

[Claim 3] Telephone characterized by preparing the display which shows the direction where cursor moves to the key to which cursor is moved in the telephone which operates a means to input a number, and the means to which cursor is moved by the same key.

[Claim 4] Telephone characterized by equipping the core of a key to which cursor is moved with the key which opts for selection in claim 3.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[The field of the invention to which invention belongs] This invention relates to the key stroke approach in telephones, such as a cellular phone.

[0002]

[Description of the Prior Art] By telephone, such as a cellular phone which operates a means to input the conventional number, and the means to which cursor is moved by the same key, the configuration of a key was the same.

[0003]

[Problem(s) to be Solved by the Invention] In order to operate it by the key of the same configuration in the above-mentioned conventional technique also at the time of the time of a number input, and a cursor advance, especially in the case of the cursor advance, the operation mistake of a key increased and it was user-unfriendly for the user.

[0004]

[Means for Solving the Problem] A user's operation mistake decreases by making it the configuration which expresses the direction to which cursor moves the configuration of a key in the key used at the time of a cursor advance, or performing the display which shows a direction to a key, and the telephone excellent in operability can be further realized by having the decision key which is used for the core of a key to which cursor is moved only in the case of a cursor advance.

[0005]

[Embodiment of the Invention] Below, this invention is stated to a detail according to an example.

[0006] In drawing 1, (101) is the input section by this invention.

[0007] (102) is an input change control section which controls the change of a number input or a cursor input.

[0008] (103) is a display.

[0009] (104) is an auxiliary storage unit which saves various data etc.

[0010] (105) is the number input section for inputting a number.

[0011] (106) is the cursor processing section which determines the alphabetic character which moves and displays cursor.

[0012] One example of the telephone in this invention is shown in drawing 2. This example shows the example of a configuration of the key when using as the same key the number input key of the input section, and the key to which cursor is moved. Above and a key [4] (204) are configurations as which the left and a key [6] (206) express the right and a key [8] (208) expresses down, and the key [2] (202) shown in drawing 2 which is the input section shows the four directions of the four directions of the telephone display screen (200). Perform distinction of number input mode or cursor input mode by the input change control section (102) of drawing 1, and when it is in number mode The key [1] (201) of drawing 2 which is the input section, a key [2] (202), The number corresponding to the number specified in each key of a key [3] (203), a key [4] (204), a key [5] (205), a key [6] (206), a key [7] (207), a key [8]

(208), and a key [9] (209) is displayed on the telephone display screen (200).

[0013] Drawing 3 shows the example of a display on the telephone display screen (200) at the time of number input mode.

[0014] Moreover, when it is in cursor mode, cursor is moved by the key [2] (202) shown in drawing 2 which is the input section, the key [4] (204), the key [6] (206), and the key [8] (208). Moreover, a key [5] (205) acquires the alphabetic character corresponding to a cursor location, stores the acquired alphabetic character in the auxiliary storage unit (104) of drawing 1, and is made to determine the present cursor location and to display it on the telephone display screen (200) of drawing 2.

[0015] Drawing 4, drawing 5, drawing 6, drawing 7, and drawing 8 show the example of migration and the example of a display of cursor on the telephone display screen (200) of drawing 2 at the time of cursor mode. In drawing 4, drawing 5, drawing 6, drawing 7, and drawing 8, the same number was given to the same thing as drawing 2.

[0016] Drawing 4 is an initial screen at the time of cursor mode, and a cursor location is located in the location of "\*\*\*" (301) on the telephone display screen (200).

[0017] the case where the key [2] (202) of drawing 2 is pressed from the condition of drawing 4 -- a cursor location -- drawing 5 -- "-- " (302) -- it moves to a location.

[0018] When the key [4] (204) of drawing 2 is pressed from the condition of drawing 4, a cursor location is moved to the location of "\*\*\*" (303) of drawing 6.

[0019] When the key [6] (206) of drawing 2 is pressed from the condition of drawing 4, a cursor location is moved to the location of "\*\*\*" (304) of drawing 7.

[0020] When the key [8] (208) of drawing 2 is pressed from the condition of drawing 4, a cursor location is moved to the location of "\*\*\*" (305) of drawing 8.

[0021] When the key [5] (205) of drawing 2 is pressed from the condition of drawing 8, "\*\*\*" is displayed on the alphabetic character input display (300) of drawing 9.

[0022] A programming flowchart is used for drawing 10 and the processing at the time of number input mode and cursor mode is explained to it.

[0023] In drawing 10, the same number was given to the same thing as drawing 1.

[0024] The input state detection processing (1001) equivalent to the input change control section (102) of drawing 1 distinguishes number input mode or cursor mode from the present condition, and determines the mode. If it is number input mode as a result of mode distinction, processing of the number input section (105) will be performed.

[0025] A programming flowchart is used for drawing 11 and processing of the number input section (105) of drawing 10 is explained to it.

[0026] The number input section (105) performs input waiting of a key (1010).

[0027] When a key is pressed, the pressed key judges below in "9" more than "0" (1011-1012).

[0028] When the key pressed when a key was pressed is below "9" more than "0", the inputted number is displayed on a display (103) (1013).

[0029] When the pressed key is "\*", "\*" is displayed on a display (103) (1014-1015).

[0030] When the pressed key is "#", "#" is displayed on a display (103) (1016-1017).

[0031] The selected function is performed when other (1018).

[0032] Moreover, if the mode is cursor mode, the cursor processing section (106) will be performed.

[0033] The cursor processing section (106) is explained using the programming flowchart of drawing 12.

[0034] The cursor processing section (106) performs input waiting of a key (1020).

[0035] When a key is pressed, the pressed key judges in "5" (1021).

[0036] When the pressed key is "5", the location of the present cursor is determined and the alphabetic character corresponding to a cursor location is acquired, and the acquired alphabetic character is stored in the auxiliary storage unit (104) of drawing 1, and it displays on the telephone display screen (200) (1022-1025).

[0037] When a key is pressed, it judges below in "9" more than "0" in which the pressed key does not contain "5" (1026-1027).



[0038] When the key pressed when the key pressed when a key was pressed was below "9" more than "0" is "2", cursor is moved upwards (1028-1029).

[0039] When the pressed key is "4", cursor is moved to the left (1030-1031).

[0040] When the pressed key is "6", cursor is moved to the right (1032-1033).

[0041] When the pressed key is "8", cursor is moved downward (1034-1035).

[0042] The selected function is performed when the pressed key is not "\*" or "#", either (1036-1038).

[0043] As mentioned above, although the cursor advance of the four directions of vertical and horizontal was explained, the direction to which cursor moves is not necessarily the direction of four directions. The configuration of the key to which cursor is moved according to the number of directions which cursor moves is also proportional.

[0044] The example of a configuration of the key in the input section is shown in drawing 13. The direction to which the example 1 of a configuration of drawing 13 moves cursor expresses the direction to which cursor makes it move corresponding to a total of four directions of vertical and horizontal in the configuration of an input key "2", an input key "4", an input key "6", and an input key "8." The direction to which the example 2 of a configuration of drawing 13 and the example 3 of a configuration move cursor expresses the direction to which cursor makes it move corresponding to a total of eight directions of four directions and the upper right, the upper left, the lower right, and the lower left in the configuration of input key "1", input key "2", input key "3", input key "4", input key "6", input key "7", input key "8", and input key "9" \*\*.

[0045] Two examples of the telephone in this invention are shown in drawing 14. This example shows the example of a display of the key when using as the same key the number input key of the input section, and the key to which cursor is moved. In drawing 14, the same number was attached about the same function as drawing 2.

[0046] Above and a key [4] (204) prepare the display of the trigonum the left and a key [6] (206) indicate the right and a key [8] (208) indicates down to be, the key [2] (202) shown in drawing 14 which is the input section shows the four directions of the four directions of the telephone display screen (200), and the cursor on the telephone display screen (200) moves towards said triangular display at the time of cursor mode. Moreover, a key [5] (205) turns into a key which opts for selection at the time of cursor mode, acquires the alphabetic character corresponding to the present cursor location, stores the acquired alphabetic character in the auxiliary storage unit (104) of drawing 1, and is made to display it on the telephone display screen (200).

[0047] About explanation of the key input processing at the time of number input mode and cursor input mode, it is the same as that of the contents explained in the one example.

[0048] Drawing 15 and drawing 16 are the examples of a display of the key (201-209) of the input section shown in drawing 14. In drawing 15 and drawing 16, the same number was attached about the same function as drawing 14.

[0049] Drawing 15 forms the line (400) which shows the physical relationship of a key focusing on the key (205) of "5" arranged in the center of the key (201-209) of the input section, and shows the direction of the cursor at the time of a cursor advance.

[0050] The gestalt of operation shown in drawing 16 can acquire effectiveness with the same said of forming a part of the mark which shows directivity to the periphery of the key arranged in the center, and the key (201-204) (206-209) arranged around the key (205) of "5" here, for example, an arrow head, and line which shows the physical relationship of the key corresponding to a central key, for example, line which connects both keys, with printing or irregularity.

[0051] In addition, said mark is good to prepare in the periphery of each key of "1", "2", "3", "4", "5", "6", "7", "8", and "9" which shows the upper and lower sides, right and left, and slant.

[0052]

[Effect of the Invention] By making it the configuration which expresses the direction to which cursor moves the configuration of a key in the key to which cursor is moved according to this invention or preparing the display which shows a direction to a key, and having the decision key which determines selection as the core of a key to which cursor is moved further, cursor actuation can make it easy and

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TECHNICAL FIELD

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PRIOR ART

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EFFECT OF THE INVENTION

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MEANS

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[Means for Solving the Problem] A user's operation mistake decreases by making it the configuration which expresses the direction to which cursor moves the configuration of a key in the key used at the time of a cursor advance, or performing the display which shows a direction to a key, and the telephone excellent in operability can be further realized by having the decision key which is used for the core of a key to which cursor is moved only in the case of a cursor advance.

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[0015] Drawing 4, drawing 5, drawing 6, drawing 7, and drawing 8 show the example of migration and the example of a display of cursor on the telephone display screen (200) of drawing 2 at the time of cursor mode. In drawing 4, drawing 5, drawing 6, drawing 7, and drawing 8, the same number was given to the same thing as drawing 2.

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[0018] When the key [4] (204) of drawing 2 is pressed from the condition of drawing 4 , a cursor location is moved to the location of "\*\*\*" (303) of drawing 6 .

[0019] When the key [6] (206) of drawing 2 is pressed from the condition of drawing 4 , a cursor location is moved to the location of "\*\*\*" (304) of drawing 7 .

[0020] When the key [8] (208) of drawing 2 is pressed from the condition of drawing 4 , a cursor location is moved to the location of "\*\*\*" (305) of drawing 8 .

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[0024] The input state detection processing (1001) equivalent to the input change control section (102) of drawing 1 distinguishes number input mode or cursor mode from the present condition, and determines the mode. If it is number input mode as a result of mode distinction, processing of the number input section (105) will be performed.

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[0026] The number input section (105) performs input waiting of a key (1010).

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[0028] When the key pressed when a key was pressed is below "9" more than "0", the inputted number is displayed on a display (103) (1013).

[0029] When the pressed key is "\*", "\*" is displayed on a display (103) (1014-1015).

[0030] When the pressed key is "#", "#" is displayed on a display (103) (1016-1017).

[0031] The selected function is performed when other (1018).

[0032] Moreover, if the mode is cursor mode, the cursor processing section (106) will be performed.

[0033] The cursor processing section (106) is explained using the programming flowchart of drawing 12 .

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[0035] When a key is pressed, the pressed key judges in "5" (1021).

[0036] When the pressed key is "5", the location of the present cursor is determined and the alphabetic character corresponding to a cursor location is acquired, and the acquired alphabetic character is stored in the auxiliary storage unit (104) of drawing 1 , and it displays on the telephone display screen (200) (1022-1025).

[0037] When a key is pressed, it judges below in "9" more than "0" in which the pressed key does not contain "5" (1026-1027).

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[0043] As mentioned above, although the cursor advance of the four directions of vertical and horizontal was explained, the direction to which cursor moves is not necessarily the direction of four directions. The configuration of the key to which cursor is moved according to the number of directions which cursor moves is also proportional.

[0044] The example of a configuration of the key in the input section is shown in drawing 13 . The direction to which the example 1 of a configuration of drawing 13 moves cursor expresses the direction to which cursor makes it move corresponding to a total of four directions of vertical and horizontal in the configuration of an input key "2", an input key "4", an input key "6", and an input key "8." The

direction to which the example 2 of a configuration of drawing 13 and the example 3 of a configuration move cursor expresses the direction to which cursor makes it move corresponding to a total of eight directions of four directions and the upper right, the upper left, the lower right, and the lower left in the configuration of input key "1", input key "2", input key "3", input key "4", input key "6", input key "7", input key "8", and input key "9" \*\*.

[0045] Two examples of the telephone in this invention are shown in drawing 14 . This example shows the example of a display of the key when using as the same key the number input key of the input section, and the key to which cursor is moved. In drawing 14 , the same number was attached about the same function as drawing 2 .

[0046] Above and a key [4] (204) prepare the display of the trigonum the left and a key [6] (206) indicate the right and a key [8] (208) indicates down to be, the key [2] (202) shown in drawing 14 which is the input section shows the four directions of the four directions of the telephone display screen (200), and the cursor on the telephone display screen (200) moves towards said triangular display at the time of cursor mode. Moreover, a key [5] (205) turns into a key which opts for selection at the time of cursor mode, acquires the alphabetic character corresponding to the present cursor location, stores the acquired alphabetic character in the auxiliary storage unit (104) of drawing 1 , and is made to display it on the telephone display screen (200).

[0047] About explanation of the key input processing at the time of number input mode and cursor input mode, it is the same as that of the contents explained in the one example.

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[0049] Drawing 15 forms the line (400) which shows the physical relationship of a key focusing on the key (205) of "5" arranged in the center of the key (201-209) of the input section, and shows the direction of the cursor at the time of a cursor advance.

[0050] The gestalt of operation shown in drawing 16 can acquire effectiveness with the same said of forming a part of the mark which shows directivity to the periphery of the key arranged in the center, and the key (201-204) (206-209) arranged around the key (205) of "5" here, for example, an arrow head, and line which shows the physical relationship of the key corresponding to a central key, for example, line which connects both keys, with printing or irregularity.

[0051] In addition, said mark is good to prepare in the periphery of each key of "1", "2", "3", "4", "5", "6", "7", "8", and "9" which shows the upper and lower sides, right and left, and slant.

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing one example of this invention.

[Drawing 2] It is one example of the telephone in this invention.

[Drawing 3] It is an example of a display at the time of number input mode.

[Drawing 4] It is an example of a display at the time of cursor mode.

[Drawing 5] It is an example of a cursor advance display at the time of cursor mode.

[Drawing 6] It is an example of a cursor advance display at the time of cursor mode.

[Drawing 7] It is an example of a cursor advance display at the time of cursor mode.

[Drawing 8] It is an example of a cursor advance display at the time of cursor mode.

[Drawing 9] It is an example of a decision display at the time of cursor mode.

[Drawing 10] It is the processing flow of an input change control section.

[Drawing 11] It is the processing flow of the number input section.

[Drawing 12] It is the processing flow of the cursor processing section.

[Drawing 13] It is the example of a configuration of the input key of telephone.

[Drawing 14] It is the configuration of a key of expressing four directions and eight directions.

[Drawing 15] It is the example of a display of the input key which shows directivity.

[Drawing 16] It is the example of a display of the input key which shows directivity.

[Description of Notations]

101 [ ... An auxiliary storage unit, 105 / ... The number input section, 106 / ... Cursor processing section. ] ... The input section, 102 ... An input change control section, 103 ... A display, 104

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DRAWINGS

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[Drawing 1]

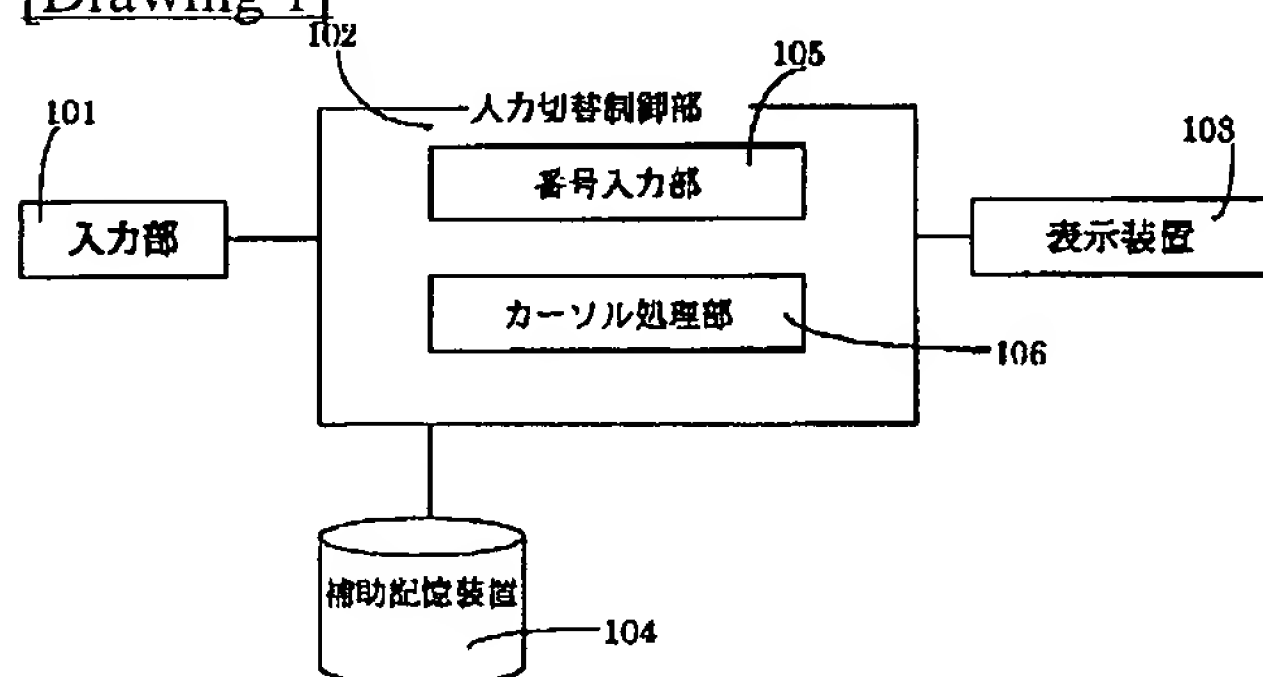


図 1

[Drawing 2]

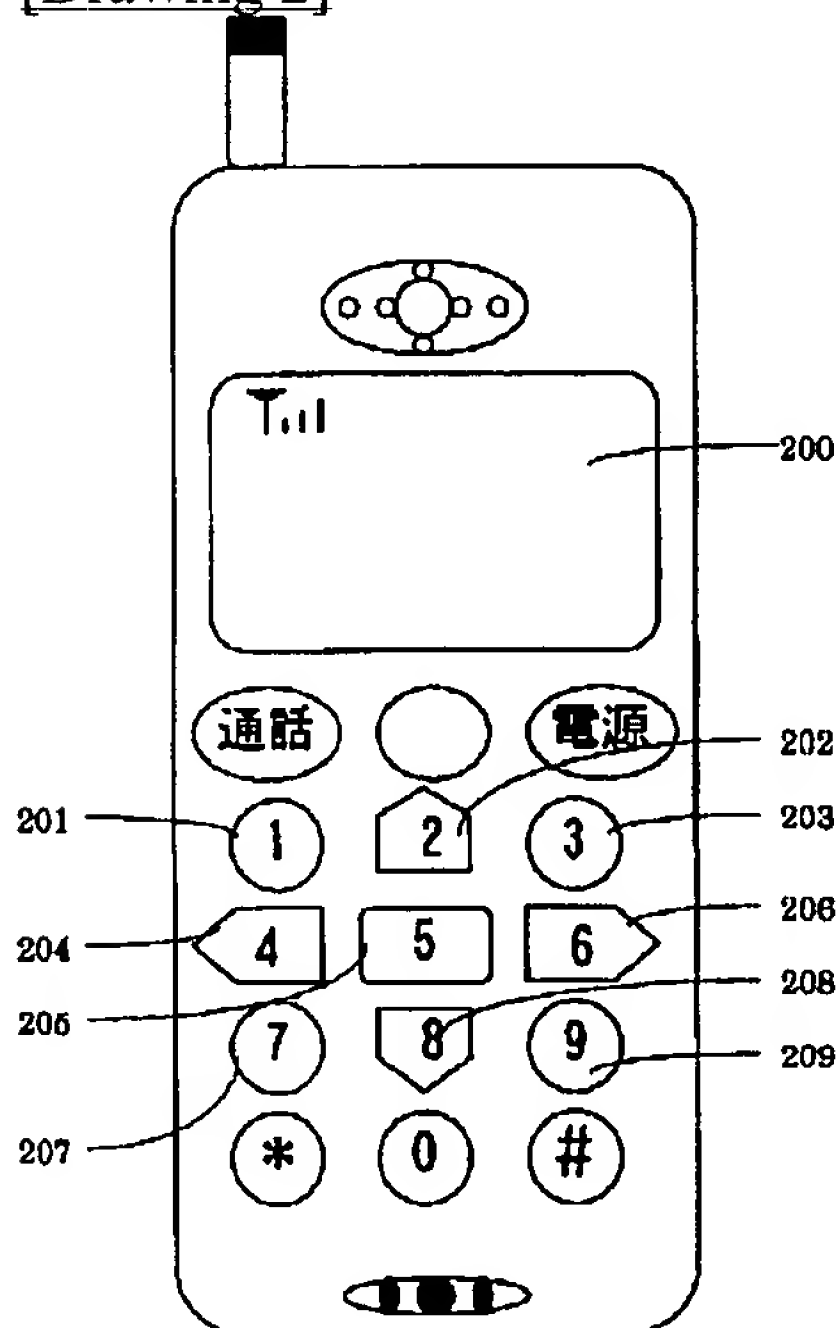


図 2

[Drawing 3]

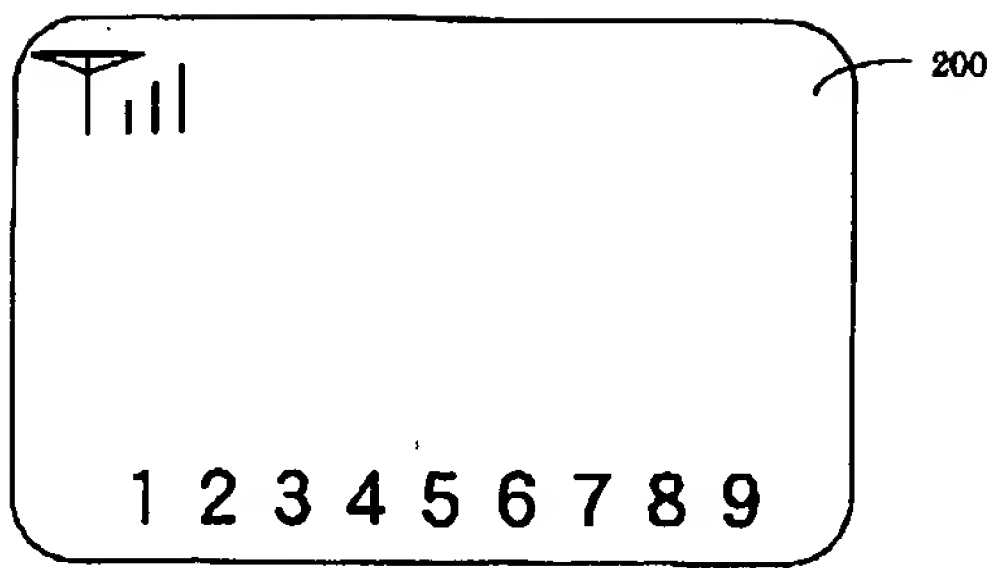


図 3

[Drawing 4]

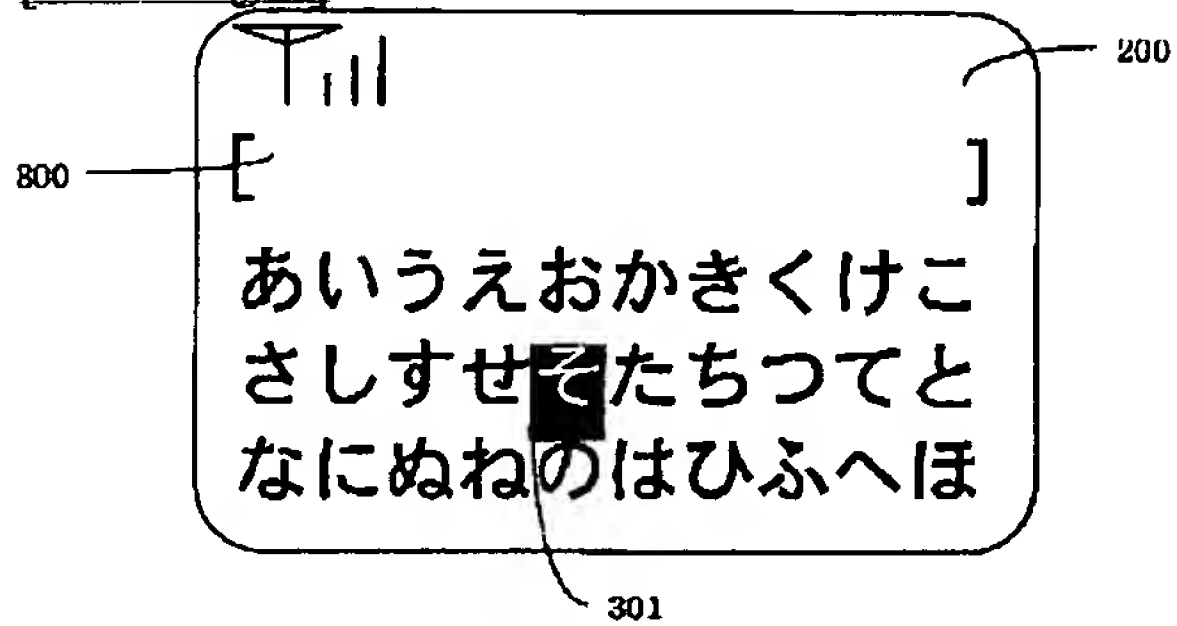


図 4

[Drawing 5]

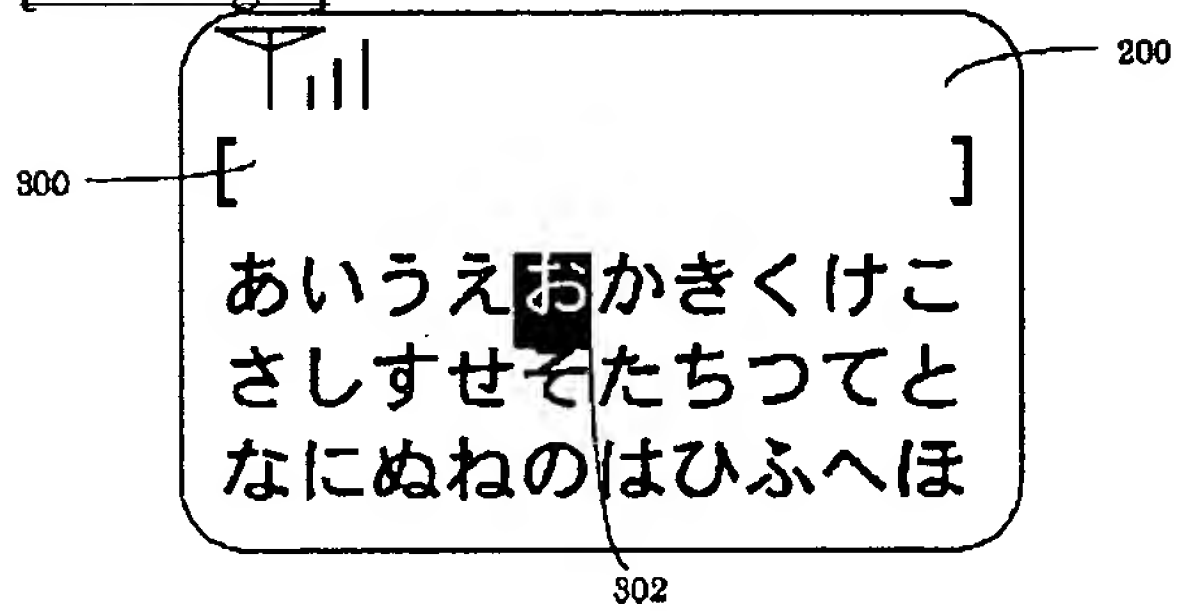


図 5

[Drawing 6]

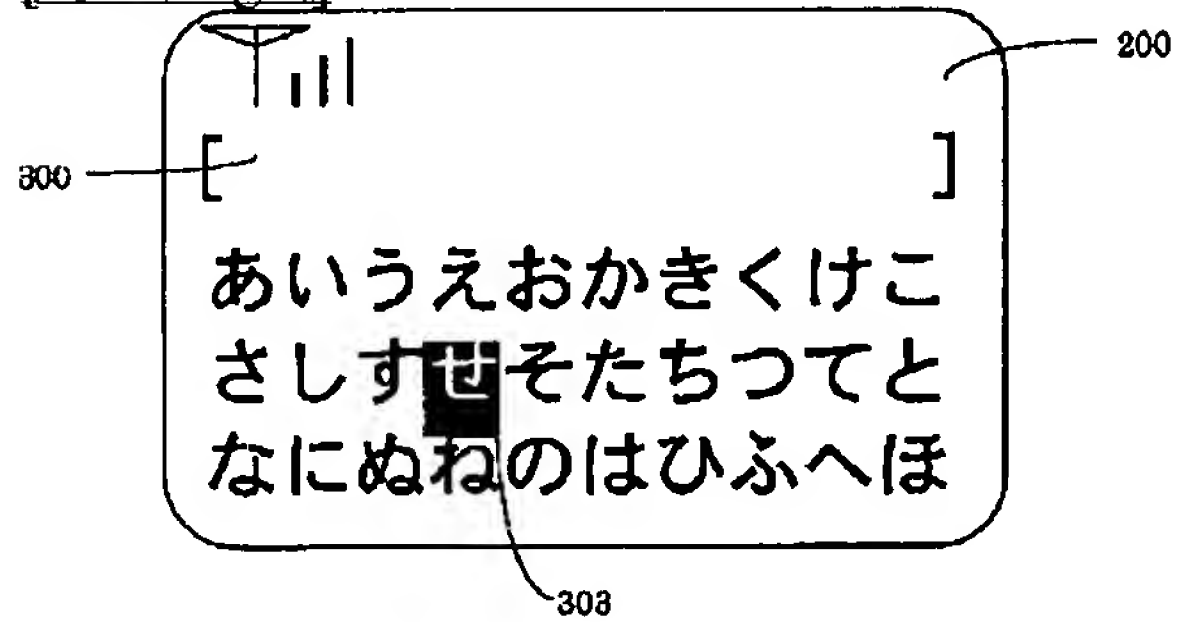


図 6

[Drawing 7]

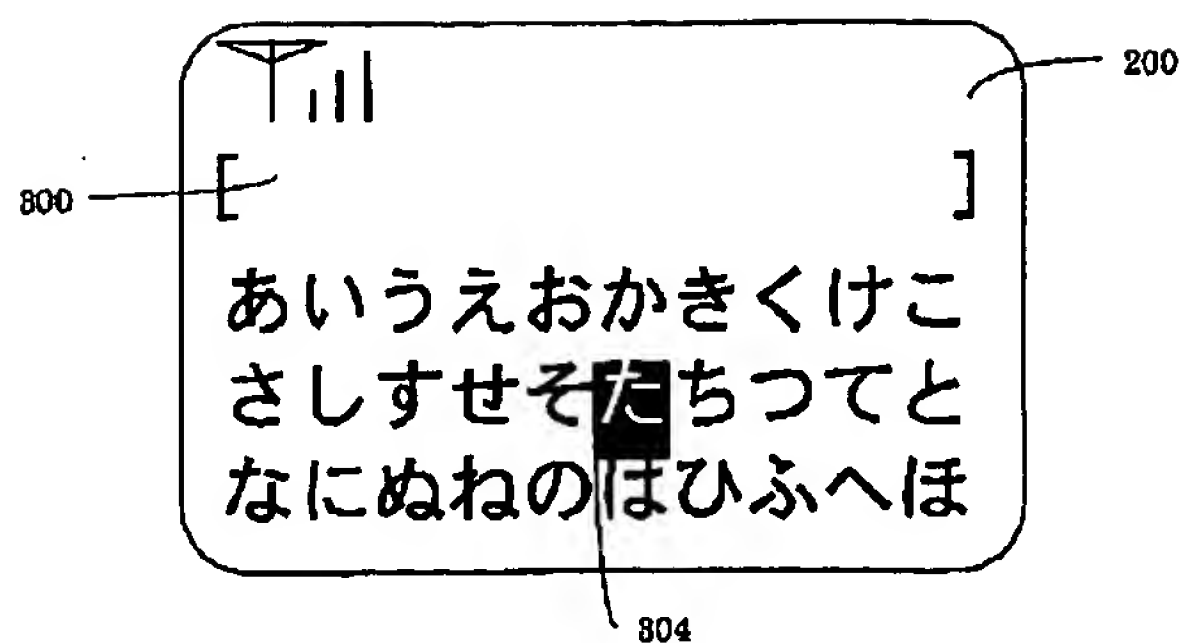


図 7

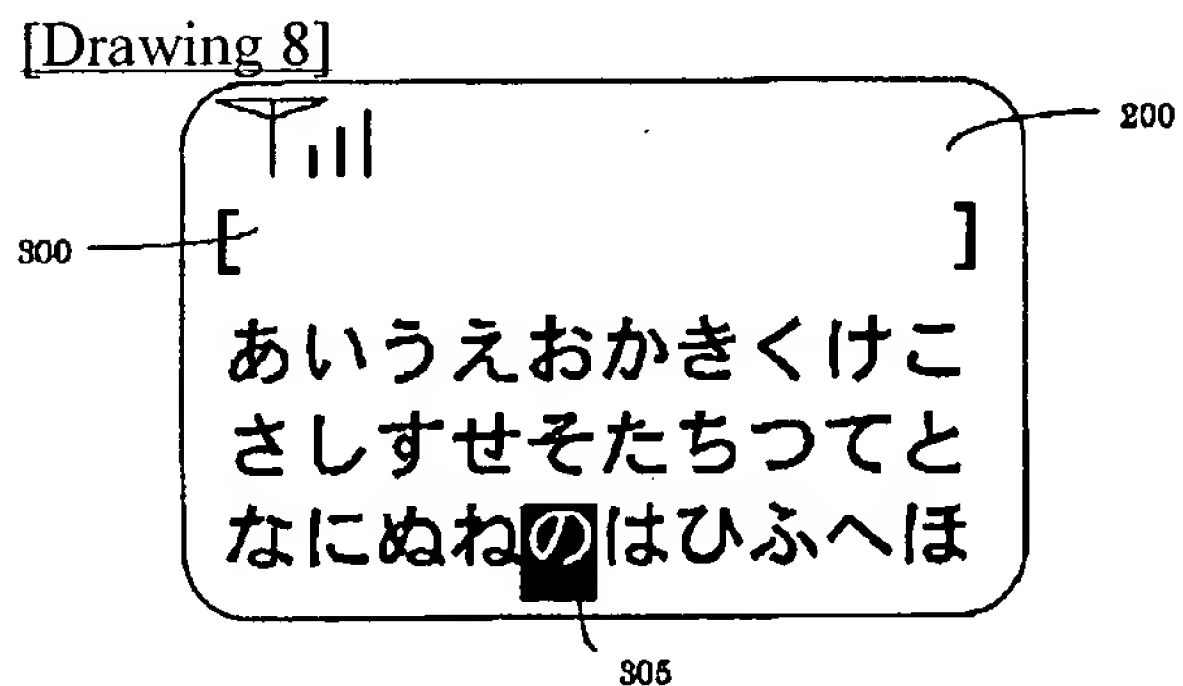


図 8

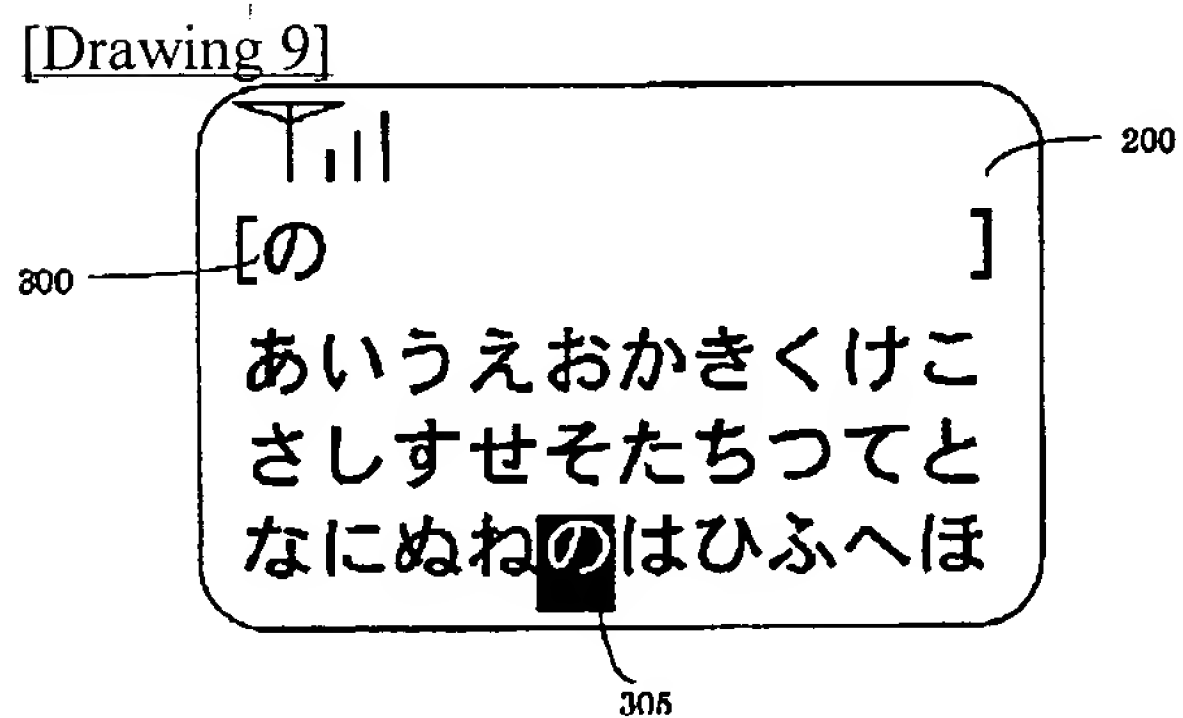


図 9

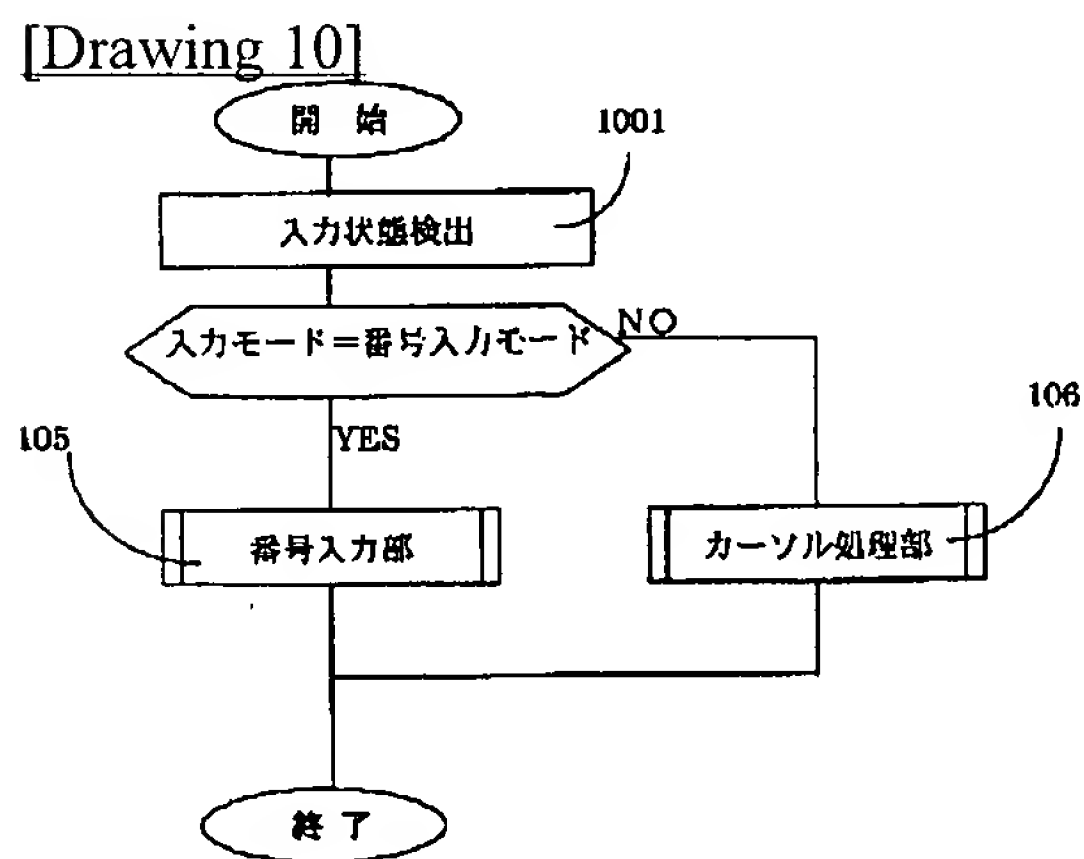


図 10

[Drawing 11]

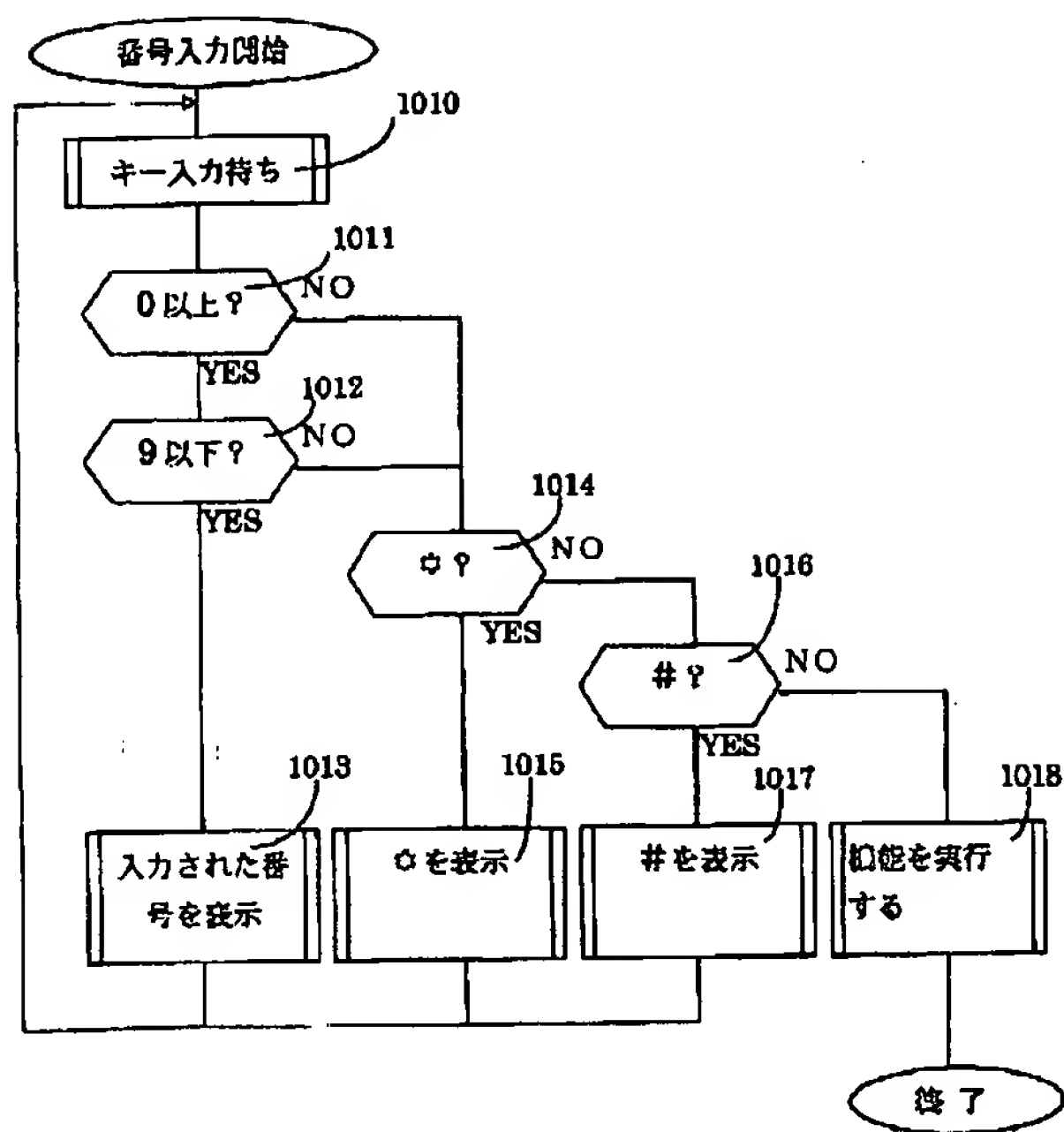


図 1 1

[Drawing 12]

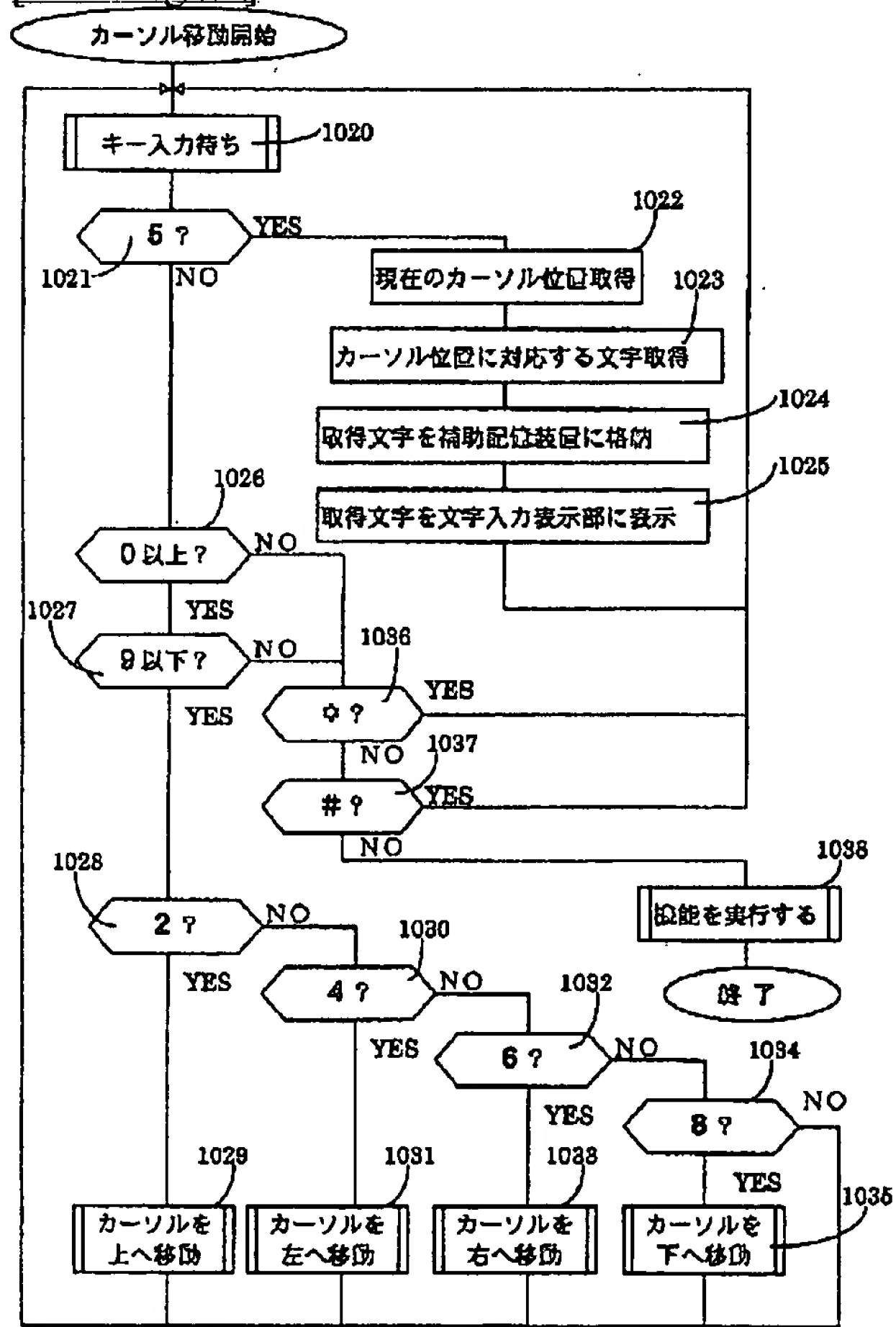
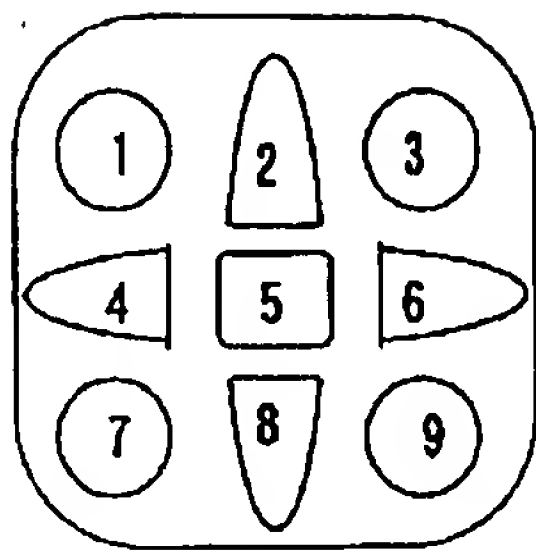
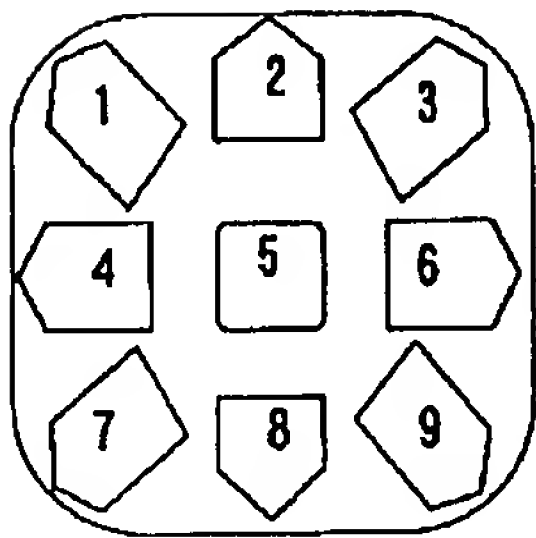


図 1 2

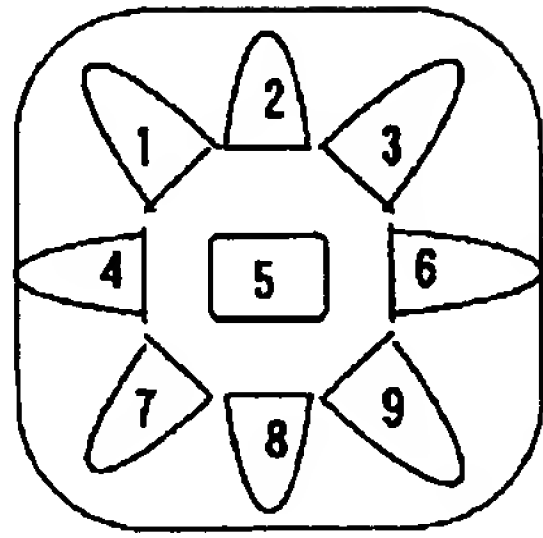
[Drawing 13]



形状例 1



形状例 2



形状例 3

图 13

[Drawing 14]

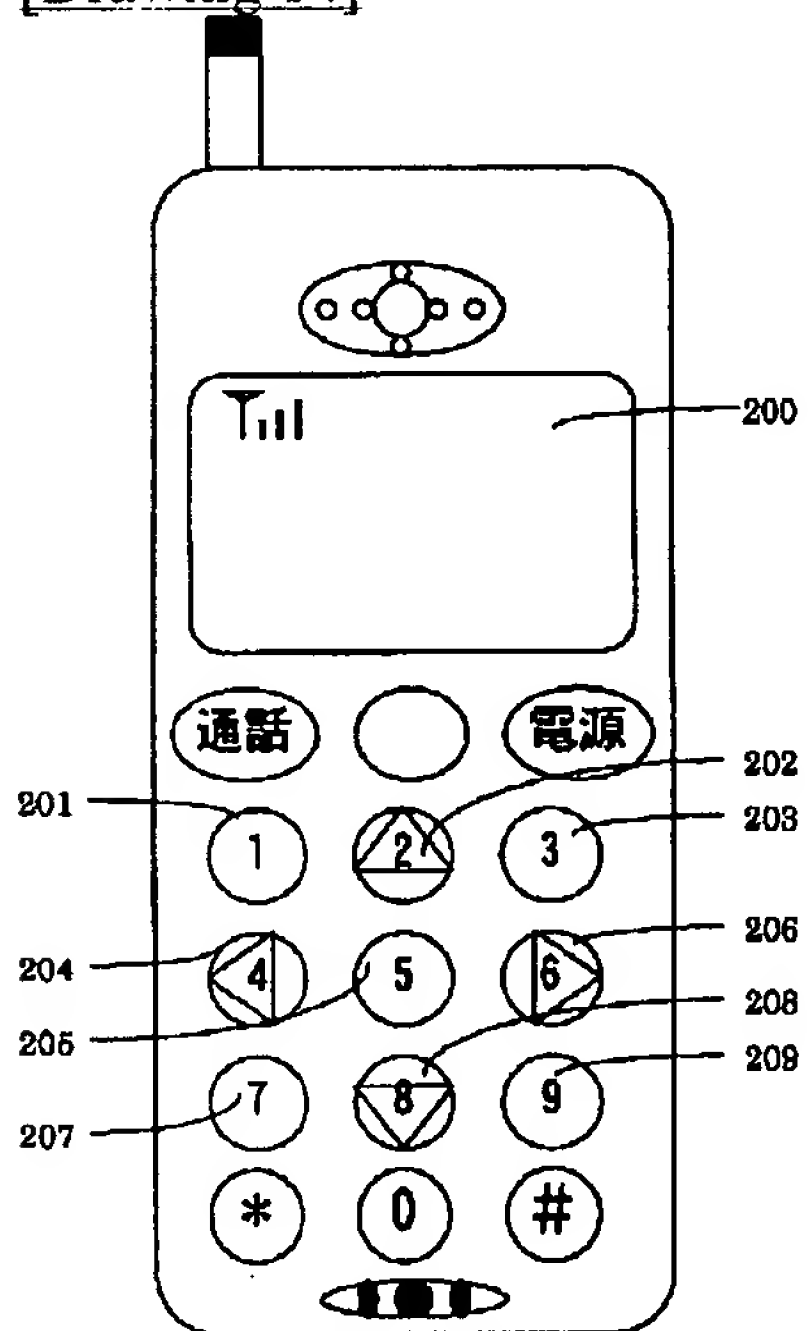
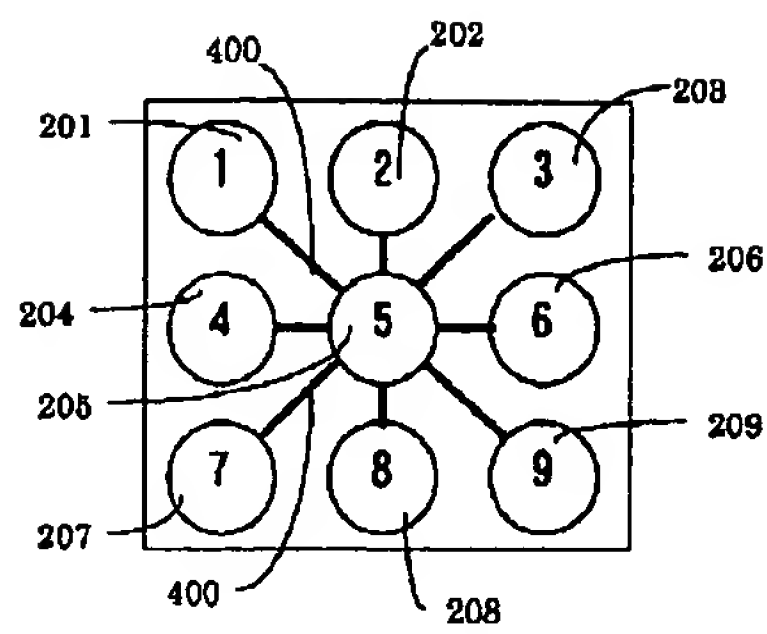


图 14

[Drawing 15]



表示例

图 15

[Drawing 16]

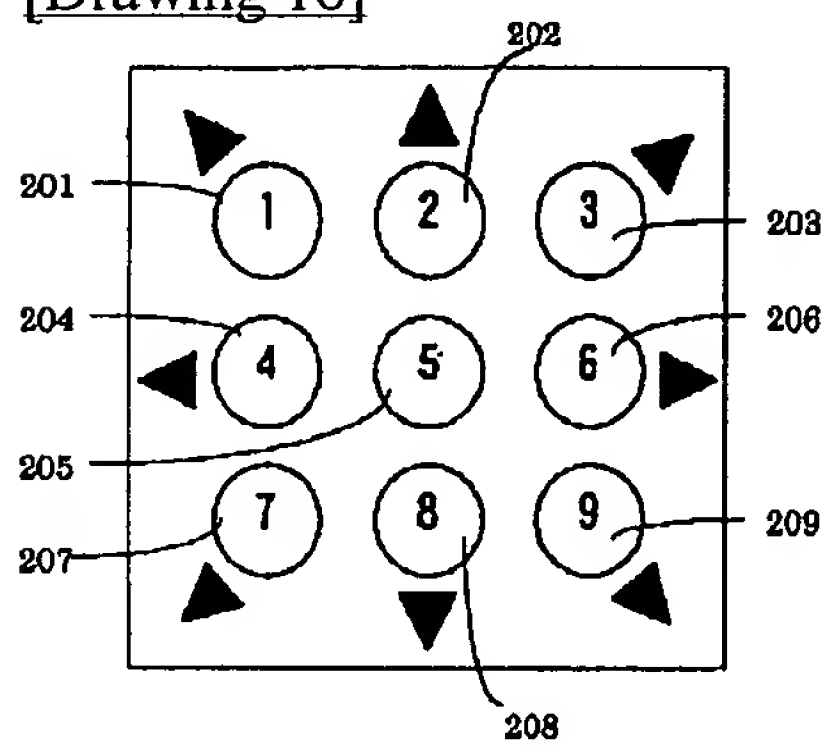


图 16

[Translation done.]